

Editorials

Some Side Effects of Science and Technology on Medical Practice

NEW SCIENCE and new technology are in the process of transforming the world in which we live. In medical science and medical technology the pace of progress has been little short of phenomenal and, if anything, it seems to be accelerating. So far, medical practice has generally been able to keep up with this astonishing progress and apply it effectively in patient care. The result has been an enormous success—the best medical care the world has ever seen, and what the future holds simply boggles the imagination. This progress and this accomplishment have been fostered by government and welcomed by patients and the public. Even though the costs are soaring beyond any expectations (a better product usually costs more), there are still no signs that the public wants less health care.

But there is a downside to this record of scientific and technologic success that is a direct result of it. An unacceptable escalation of costs is already abundantly evident and a source of increasing concern, as is the quality of whatever care may be given at less cost. But there are other problems. Medical science itself is beginning to show some feet of clay. It is becoming common knowledge that many treatments in daily use are simply ineffective. Much of accepted medical practice is not all that scientific, and perhaps it is best that it not be. But there are concerns about the quality and costs of worthless treatments and about any harm that may be done by their use, and there is disillusion when science changes its mind, as it did in the recommended treatment of cancer of the breast, for example. And then there are scientifically indefensible variances in the way the same kinds of patients are treated for the same kinds of conditions with wide differences in the costs if not the quality of the treatments and services given. Yes, there is some clay on the feet of medical science and technology and some on the feet of physicians as well, since these are all problems of scientific medical practice. Unfortunately, physicians have been somewhat reluctant to examine problems such as these although they are quite clearly side effects of the successful application of new science and new technology in patient care. The result is that others than physicians and medical scientists are beginning to address these issues with whatever this may portend for physician leadership in medical practice and patient care.

In another dimension, there can be no question but that the accelerating progress in science and technology has had an increasing impact on what we like to call the art of medicine. This art, so important to patient satisfaction and to bringing the healing power of faith and trust to bear to relieve anxiety and suffering (and sometimes to effect a cure), is beginning to be replaced by a new art, that of sparring with patients about their care, dancing with the payors and, to the extent possible, avoiding becoming involved in claims of malpractice. The ancient art, which depends upon a trusting and understanding

relationship between physician and patient, is being further weakened by the fractionation of patients into organ systems and of doctors into specialties and subspecialties, all to serve the imperatives of modern science and technology. In many instances patients are almost forced to deal with their own wholeness and in effect be their own doctors and make their own decisions about their health care. Or, missing the healing power and comfort of the art, they may seek solace, comfort and even curing from an ever increasing number of other often “nonscientific” health professionals who seem better able to provide them with what they need. One is reminded of Gresham’s law in economics which predicts that bad money will always drive out good. In this case the good is what has always been a substantial part of a practicing physician’s armamentarium. All of this can profoundly affect the practice of medicine and can have the effect of ceding much of its traditional role—and turf—to others.

Another side effect of science and technology in medical practice is the shifts that are occurring in decision-making in patient care. It still remains to be seen just how much hospital administrators, boards of trustees, managers of for-profit health care systems and others will be making medical practice decisions in the next few years, but they are likely to be increasingly interested and probably more involved because of cost factors. Another shift that is occurring in decision-making is exemplified by the recent “Baby Doe legislation” and the ethical and legal controversies about prolonging life at any age when there is little expectation that any reasonable quality of life will result. While admittedly none of these issues is fully resolved, the trend is for these kinds of medical practice decisions to be mandated by federal law, by courts or by others than the families and persons most concerned and their physicians. The power to decide these issues is being taken from the hands of those who must then live with the decisions that have been made for them.

We are again reminded that all of these problems of medical practice are simply the side effects of the successful application by physicians of new science and new technology in patient care. They are patients’ problems and they are physicians’ problems. Each one poses a challenge and an opportunity to provide leadership in finding a solution. They are inseparable from the new science and technology. They are inseparable from medical practice and patient care. Although the medical profession does not have the power it once had in health care, it is not impotent. It is well regarded in public opinion polls, and indeed much of the public is looking to physicians for help and guidance—yes, leadership—in dealing with these problems. As physicians and as a profession we now have an opportunity to provide the leadership to meet many of them head on by recognizing them for what they are and trying to do something about them. If this is done successfully it could mark yet another watershed in the marvelous evolution of our profession.

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